The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently Amended) A method for the identification of an agonist, antagonist or any modulator of a calcium-coupled [protein]receptor, comprising:

(a)-[immobilizing]disposing [said modulator]a compound on a solid support,

(b)-incubating one or more cell(s) expressing apoaequorin and said calcium-coupled [protein]receptor with coelenterazine[a cofactor of said calcium-coupled protein] in order to reconstitute an active aequorin by said cell(s),

(c)-adding one or more of said cells to said solid support with said compound, and

(d)-measuring the light emitted by said cell(s).

2. (Original) The method according to claim 1, wherein the solid support is a microtiter plate.

3. (Original) The method according to claim 2, wherein said microtiter plate is selected from the group consisting of: a 96-well microtiter plate, a 384-well plate, and a 1536-well plate.

4. (Original) The method according to Claim 1, wherein the cell expresses apoaequorin in the cytoplasm or in the mitochondria.

5. (Currently Amended) The method according to Claim 1, wherein the cell expressing said calcium-coupled receptor is a cell expressing an endogenous or a recombinant G-protein-coupled receptor and/or a cell which expresses a protein intended to ensure a coupling of the analysed receptor to the calcium pathway[the calcium-coupled protein is a recombinant G-protein-coupled receptor].

6. (Currently Amended) The method according to claim 5, wherein said G-protein[-coupled receptor] or said protein intended to ensure a coupling of the analysed receptor to the calcium pathway is [a recombinant G-protein-coupled receptor]selected from the group consisting of: natural Gα16 or Gα15 protein, chimeric G-protein resulting from a fusion between two different G-proteins, and a phospholipase Cβ2 protein.

7. (Original) The method according to Claim 1, wherein the measurement of the emitted light is obtained with one or more luminometer(s) equipped with several dispensers and measurement heads.

8. (Previously Withdrawn) A high-throughput screening device, comprising:

-a microtiter plate ,

-a medium containing cell(s) expressing apoaequorin and a calcium-coupled protein,

- coelenterazine, and

-a detector of emitted light by said cell(s).

9. (Previously Withdrawn) A device according to claim 8, further comprising an automated mechanism which can perform the method.

10. (Previously Withdrawn) An agonist or antagonist of a receptor identified by the method according to Claim 1.

11. (Currently Cancelled) The method of Claim 1 wherein the calcium-coupled protein is a calcium-coupled receptor.

12. (Currently Cancelled) The method of Claim 1 wherein the cofactor of the calcium-coupled protein is coelenterazine.

13. (Currently Cancelled) The method according to Claim 1, wherein the cell expresses proteins intended to ensure a coupling of the analysed receptor to the calcium pathway.

14. (Currently Cancelled) The method according to claim 5, wherein said chimeric G-protein results from a fusion between two different G-proteins.

15. (Currently Cancelled) The method according to claim 5, wherein said chimeric G-protein results from a fusion between a G-protein and phospholipase Cβ2.

16. (Currently Cancelled) The method of Claim 8 wherein said calcium-coupled protein is a calcium-coupled receptor.

17. (Currently Amended) The method of claim 1, wherein said calcium-coupled [protein]receptor is a calcium coupled ion channel.